

- 1 **Q. (Reference Technical Conference Issue 6) For the: 1) proposed addition of**
 2 **closers (*sic*) project, 2) the transmission line 55L rebuild project, and 3) the**
 3 **refurbishment of feeder SUM-01 project, please provide the following:**
 4 **a) Historic SAIDI and SAIFI figures for customers served by these facilities**
 5 **for each of the past 10 years.**
 6 **b) All complaints from customers served by these facilities for each of the**
 7 **past 10 years.**
 8 **c) Feedback received when customers were contacted about the projects,**
 9 **specifically feedback relating to willingness to pay and trade-offs**
 10 **between improved reliability and cost.**
 11 **d) Project cost estimates consistent with the requirements set out in the**
 12 **Provisional Capital Budget Application Guidelines.**
 13 **e) The forecast improvement in reliability performance (quantified)**
 14 **resulting from each of the projects.**
 15 **f) The expected risk (quantified) of deferring each of the projects by one**
 16 **or two years.**
 17 **g) Historic maintenance costs on these lines for each of the past 10 years.**
 18 **h) The expected improvement in operating costs resulting from each of the**
 19 **projects.**
 20 **i) The payback period for the recommended alternative relative to**
 21 **continuing to maintain existing assets.**

- 22
 23 **A. a)** Attachment A provides the requested SAIDI and SAIFI data.

24
 25 Newfoundland Power notes that the 2023 *Distribution Reliability Initiative* project
 26 is the only project included in Newfoundland Power's 2023 *Capital Budget*
 27 *Application* on the basis of improvements in SAIDI and SAIFI. This project
 28 involves rebuilding a section of distribution feeder SUM-01, which is among
 29 Newfoundland Power's worst performing feeders.

30
 31 The proposed *Distribution Feeder Automation* project is justified as being
 32 required to maintain Newfoundland Power's efficiency and effectiveness in
 33 responding to customer outages, particularly during severe weather events. The
 34 project is not proposed on the basis of SAIDI and SAIFI improvements. See the
 35 response to Request for Information CA-NP-151.

36
 37 The proposed *Transmission Line 55L Rebuild* project is justified as being the
 38 least-cost alternative to address the line's deteriorated condition. Given their
 39 criticality in serving customers, Newfoundland Power's transmission lines are
 40 maintained to operate to a high standard of reliability. The Company does not
 41 rely on reliability indices, which are lagging indicators, to justify capital upgrades
 42 on its transmission system. Doing so would result in a poor quality of service
 43 being experienced by large numbers of customers. See the response to Request
 44 for Information NLH-NP-030.

- 1 b) Data regarding customer complaints is not needed to determine the capital
2 upgrades required to maintain the condition of the electrical system and is
3 therefore not tracked for the facilities referenced in this Request for Information.
4 For more information, see the response to Request for Information CA-NP-162.
5
- 6 c) Newfoundland Power’s capital projects are identified through a comprehensive
7 planning process using professional engineering judgment, technical criteria,
8 objective data and economic analyses. This process identifies what expenditures
9 are necessary in a given year to maintain safe and reliable service to customers
10 at the lowest possible cost.
11
- 12 Customer feedback, when required to assess a project, is incorporated as part of
13 Newfoundland Power’s annual capital planning process.¹ However, this does not
14 include feedback relating to issues such as trade-offs between reliability and cost
15 or customers’ willingness to pay for reliable service.
16
- 17 The provincial power policy requires that Newfoundland Power provide reliable
18 service to customers at the lowest possible cost.² The capital expenditures
19 required to balance the cost and reliability of the service provided to customers
20 are, in the Company’s view, appropriately assessed through its capital planning
21 process using professional engineering judgment, technical criteria, objective
22 data and economic analyses.
23
- 24 d) The *2023 Capital Budget Application* provides cost estimates for each proposed
25 capital project and program in Schedule B to the Application. These estimates
26 have been provided in a manner that complies with the spirit and intent of the
27 Provisional Guidelines. As referenced in Schedule B, budget estimates for
28 projects and programs are expected to be accurate within a range of plus or
29 minus 10%.³
30
- 31 e) The *Distribution Feeder Automation* project and *Transmission Line 55L Rebuild*
32 project are not justified on the basis of forecast improvements in reliability
33 performance, as discussed in part a). With respect to the reliability improvement
34 to be provided to customers as part of the *Distribution Reliability Initiative*, see
35 the response to Request for Information CA-NP-158.
36
- 37 f) Newfoundland Power assessed the risks of deferring each of these capital
38 projects using its risk matrix methodology.

¹ See the response to Request for Information CA-NP-016 for a discussion of how customer preferences have been incorporated into the *2023 Capital Budget Application*. See also, the response to Request for Information CA-NP-162.

² See section 3(b)(iii) of the *Electrical Power Control Act, 1994*.

³ See the *2023 Capital Budget Application, Schedule B*, page ii.

1 Table 1 summarizes the results of the risk assessments for these projects.

Table 1 Risk Assessment Summaries				
Project	Classification	Consequence	Probability	Risk
Distribution Feeder Automation	Service Enhancement	Serious (4)	Near Certain (5)	High (20)
Distribution Reliability Initiative	Renewal	Serious (4)	Near Certain (5)	High (20)
Transmission Line Rebuild Project	Renewal	Critical (5)	Likely (4)	High (20)

2 Deferring each of these projects was assessed to present a high risk to the
 3 delivery of least-cost reliable service to customers. Details on the risk
 4 assessments for these projects are provided in Schedule B to the Application.

5
 6 Newfoundland Power’s risk matrix methodology provides qualitative
 7 assessments. With respect to quantifying risk, see the response to Request for
 8 Information CA-NP-173.

9
 10 g) Newfoundland Power does not capture maintenance cost data for each of its 300
 11 distribution feeders. These costs are captured and reported in aggregate. As a
 12 result, the Company is unable to provide the requested information.

13
 14 Table 2 provides the maintenance expenditures for Transmission Line 55L from
 15 2012 to 2021.⁴

Table 2 Transmission Line 55L Maintenance Expenditures (2012-2021)									
2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
\$0	\$0	\$0	\$1,400	\$20,000	\$163,000	\$0	\$38,000	\$30,000	\$51,000

⁴ Table 2 does not include operating costs associated with completing inspections or vegetation management.

- 1 h) Rebuilding a section of distribution feeder SUM-01 and installing automated
2 downline reclosers through the *Distribution Reliability Initiative* is expected to
3 improve the reliability performance of that feeder, thereby reducing operating
4 costs associated with responding to customer outages.
5
- 6 Rebuilding Transmission Line 55L in a new right of way would improve access to
7 the line, enabling more efficient inspections and the use of aerial devices when
8 completing work rather than climbing poles. These operating efficiencies are
9 expected to reduce operating costs associated with inspections, maintenance and
10 outage response.
11
- 12 With respect to the operating efficiencies associated with the *Distribution Feeder*
13 *Automation* project, see the response to Request for Information CA-NP-151.
14
- 15 i) See the response to Request for Information CA-NP-174 for a discussion on pay
16 back periods in capital planning.

ATTACHMENT A:

Historic SAIDI and SAIFI

Table 1
SAIDI Data¹
(2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SUM-01	6.39	2.75	2.12	8.33	7.23	3.20	7.93	13.09	7.55	8.13
Distribution Feeder Automation ²										
MOL-05	1.20	2.24	3.02	1.55	2.70	0.30	0.38	0.01	1.10	3.07
GDL-04	0.23	2.62	0.05	0.05	6.23	0.06	4.78	1.53	0.07	0.04
GDL-05	4.13	0.47	0.43	0.17	1.09	0.24	0.93	1.30	0.23	0.04
GDL-07	0.00	0.00	1.32	2.64	0.01	0.26	0.51	0.42	4.65	0.42
GDL-08	0.00	0.00	0.06	0.13	2.78	0.06	0.01	0.02	0.07	0.08
GOU-02	5.24	4.17	1.78	1.00	1.69	0.02	0.96	0.04	1.38	1.77
NCH-02	1.85	0.20	0.82	0.17	2.77	9.37	8.95	1.03	0.25	0.11
VIC-02	0.74	0.60	0.87	1.28	0.25	1.30	2.64	0.04	0.13	0.26
SPF-01	0.14	1.00	0.22	0.48	0.30	0.17	4.53	0.57	0.06	0.35
ISL-01	0.35	0.18	2.27	1.66	2.98	0.11	2.14	0.70	1.45	2.07
WAL-02	0.02	0.15	9.37	0.59	2.05	0.10	2.09	0.54	10.98	9.51
WAL-04	0.07	1.56	0.86	0.16	0.42	0.23	0.20	0.19	10.34	2.89
GFS-07	0.13	2.59	0.27	0.49	1.68	0.40	0.14	0.15	0.34	0.12
BVS-04	2.34	1.52	2.16	1.15	4.56	0.38	3.63	6.83	12.12	2.68
Transmission Line 55L (Transmission Only) ³	0.00	0.00	0.00	0.00	0.57	4.37	0.00	0.00	4.01	5.56

¹ Excludes significant events and loss of supply.

² Construction on distribution feeder GDL-09 was completed in 2021 and, as a result, 10 years of reliability data is not available.

³ Transmission Line 55L provides service to customers on seven distribution feeders supplied by Clarke’s Pond, Dunville, Quartz and Placentia Junction substations. Distribution-level customer outages are excluded from the data presented for Transmission Line 55L in Table 2.

Table 2
SAIFI Data⁴
(2012-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SUM-01	2.12	0.54	1.39	8.42	6.12	0.70	3.49	5.39	3.28	1.58
Distribution Feeder Automation ⁵										
MOL-05	2.59	1.86	3.93	1.11	2.04	0.12	2.09	0.01	3.50	2.25
GDL-04	1.11	1.16	0.09	0.18	3.98	0.04	2.08	1.12	0.05	0.04
GDL-05	2.16	1.37	0.30	0.16	1.09	0.13	0.49	0.45	0.07	1.02
GDL-07	0.0	0.0	1.01	0.83	0.01	0.08	0.56	0.25	1.73	0.37
GDL-08	0.0	0.0	0.36	0.04	2.71	0.02	0.01	0.01	0.03	0.05
GOU-02	2.01	2.88	2.72	1.05	0.00	0.01	0.15	1.00	1.15	1.78
NCH-02	1.13	0.06	1.73	1.09	1.68	5.65	2.09	0.32	0.12	0.02
VIC-02	0.34	1.04	1.07	1.46	1.08	0.27	0.90	0.07	1.06	0.14
SPF-01	0.12	1.19	0.08	7.74	0.31	0.08	2.06	1.09	0.03	1.35
ISL-01	0.13	1.89	1.53	1.05	1.58	0.05	1.11	1.04	3.25	2.05
WAL-02	0.04	0.06	4.16	1.04	1.02	0.08	0.00	1.26	8.31	5.66
WAL-04	0.06	2.02	1.93	1.69	0.25	0.13	0.00	0.08	6.74	3.03
GFS-07	1.03	2.98	1.08	1.06	1.20	0.08	0.08	1.12	2.10	0.10
BVS-04	3.04	1.44	0.48	0.17	2.20	0.14	2.60	5.12	9.12	1.64
Transmission Line 55L (Transmission Only) ⁶	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00

⁴ Excludes significant events and loss of supply.

⁵ Construction on distribution feeder GDL-09 was completed in 2021 and, as a result, 10 years of reliability data is not available.

⁶ Transmission Line 55L provides service to customers on seven distribution feeders supplied by Clarke’s Pond, Dunville, Quartz and Placentia Junction substations. Distribution-level customer outages are excluded from the data presented for Transmission Line 55L in Table 2.